SY-20 B/P

USER'S GUIDE
GUÍA DEL USUARIO
MODE D'EMPLOI

LCD Color Television
Televisor color con pantalla de cristal líquido
Téléviseur couleur à écran LCD

CASIO

E S F B/P

MA0007-B Printed in Malaysia
Imprimé en Malaisie
4685-920-1-02

Model B only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications to the product not expressly approved by CASIO could void the users authority to operate the product.

English

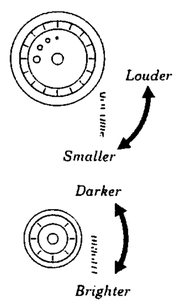
Thank you for purchasing the CASIO color LCD television. To fully enjoy the features of this unit, be sure to carefully read this manual and follow the instructions contained herein.

CAUTIONS

- **This TV is splash-resistant.**
- Power the TV with batteries only when using it in a bathroom, near a shower, or any other area where it might be exposed to splashing water. Use of the AC adaptor or car adaptor under these conditions creates the risk of electric shock.
- Never attempt your own maintenance.
- Avoid dust.
- Do not use thinners or other chemical cleaners.
- Only use specified adaptors and power sources. Never use adaptors other than genuine CASIO adaptors. Other adaptors may cause serious damage.
- Do not expose to temperature extremes or direct sunlight.
- Turn power OFF when not in use and unplug the adaptor.
- Avoid dropping and strong impact.
- When you do not use your TV for extended periods, be sure to remove the batteries. Old batteries can leak causing damage and malfunction of the unit.

WATCHING THE TELEVISION

1. Extend the rod antenna.
2. Use the function selector to select either VHF or UHF.
3. Press either of tuning key, and the tuning indicator will move to the next receivable channel. Repeat this operation until the desired channel is tuned in.
4. Use the volume control to set the sound to a suitable level.
5. Use the brightness control to adjust the brightness of the picture. The brightness of the screen changes with the viewing angle.



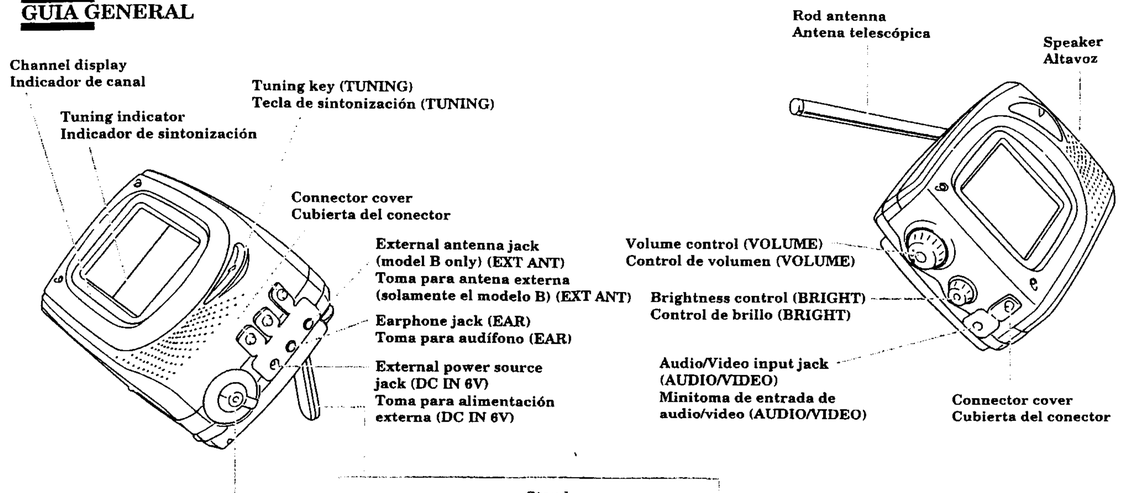
NOTE

Under poor reception conditions, the tuning indicator may continue to move without stopping because the auto tuner cannot detect weak broadcasts. In this case, use a commercially available external antenna (model B only) or relocate the TV to a place where reception is better.

Locations where TV reception is bad

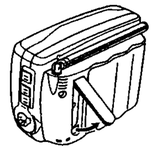
- Far away from broadcasting stations, among ferro-concrete structures or near mountains.
- Underground, in tunnels or in ferro-concrete buildings.
- Near high-tension wires, neon signs, or radio stations whose frequencies interfere.
- Near railroads, highways or airports.
- In trains or cars.

GENERAL GUIDE
GUIA GENERAL



Function selector (UHF/VHF/OFF)
UHF: UHF band CH14-CH69 (model B)
CH21-CH69 (model P)
VHF: VHF band CH2-CH13 (model B)
CH2-CH12 (model P)
OFF: Power turned OFF

Selector de funciones (UHF/VHF/OFF)
UHF: Banda UHF canales 14 al 69 (modelo B)
canales 21 al 69 (modelo P)
VHF: Banda VHF canales 2 al 13 (modelo B)
canales 2 al 12 (modelo P)
OFF: Unidad apagada



Stand
- Concerning the stand
When watching TV, you can pull out the stand as shown in the illustration. By doing this, the angle of the screen changes along with the position of the unit.

Soporte
- En relación al soporte
Cuando mire la TV, puede extraer el soporte como se muestra en la ilustración. Haciéndolo, el ángulo de la pantalla cambia junto con la posición de la unidad.

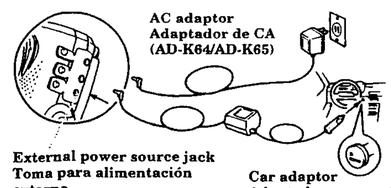


Fig.1
Figura 1

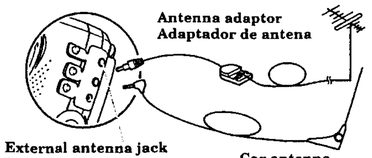


Fig. 2
Figura 2

Fig. 3
Figura 3

Fig. 4
Figura 4

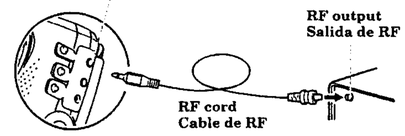


Fig. 5
Figura 5

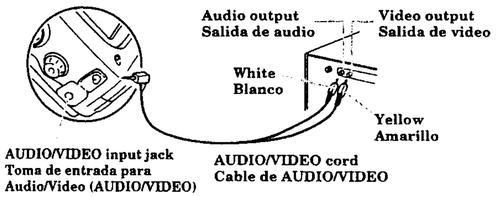


Fig. 6
Figura 6

— Recommended for areas with strong signal reception. —
— Recomendado para áreas con recepción de señal fuerte. —

PRECAUTIONS

Incorrectly using batteries can cause them to burst or leak, possibly damaging the interior of the unit. Note the following precautions:

- Be sure that the positive (+) and negative (–) poles of each battery are facing in the proper direction.
- Never mix batteries of different types.
- Never mix old batteries and new ones.
- Never leave dead batteries in the battery compartment.
- Remove the batteries if you do not plan to use the unit for long periods.
- Replace the batteries at least once every 2 years, no matter how much the unit is used during that period.
- Never try to recharge the batteries.
- Do not expose batteries to direct heat, let them become shorted, or try to take them apart.
- Should a battery leak, clean out the battery compartment of the unit immediately, taking care to avoid letting the battery fluid come into direct contact with your skin.
- This TV is not splash resistant while its battery compartment cover is removed.
- This TV is not splash resistant while its connector cover is removed or while the TV is connected to any external device or equipment.
- Before opening or closing the battery compartment cover, move to an area that is not exposed to water or other moisture, wipe off any moisture near the battery compartment, and make sure your hands are dry as well.
- Should any water ever get into the battery compartment, immediately remove all of the batteries and wipe the inside of the battery compartment with a dry cloth.
- Always double-check to make sure the battery compartment cover and connector cover are installed correctly.

BATTERY LIFE

The first indication of weakening batteries will be a reduction in volume followed by unstable picture quality and sound. At this time, replace batteries with a full set of new ones and never mix battery types.

Battery Type	Battery Life
LR6	Approx. 4.5 hours

- Only use alkaline batteries. Battery life will be shortened significantly if manganese batteries are used.
- Low battery power generates heat. Heat does not mean malfunction.
- Effective battery life may differ depending on brand.

Connection Terminals:	External antenna jack (3.5ø mini) (model B only) Earphone jack (3.5ø mini) External power source jack (DC 6V) Audio/Video input jack (3.5ø mini)
Power Supply:	3-way power supply system Batteries: 4 AA-size dry batteries AC: AC adaptor AD-K64/AD-K65 (option) Car battery: Car adaptor CA-K65 (option)
Power Consumption:	Approx. 3.6 W (model B only) Approx. 3.5 W (model P only)
Ambient Temperature Range:	32°F (0°C) ~ 104°F (40°C)
Dimensions:	5 6/16" (W) × 2 3/16" (D) × 3 6/16" (H) inches 136 (W) × 56 (D) × 85 (H) mm
Weight:	Approx. 9.2 oz 260 g (excluding batteries)

Specifications and design are subject to change without notice.

OPTIONS

AC adaptor:	AD-K64/AD-K65	RF cord:	CF-13*
Car antenna:	OS-62A*	Car adaptor:	CA-K65
Antenna adaptor:	AS-35S*	Cassette connector:	OS-76C
AUDIO/VIDEO cord:	AV-C1		

* Model B only

Note: Some of the options listed above may not be available in certain geographic areas.

Please keep all information for future reference.
Only model SY-20P conforms with EC Directives 89/336/EEC, 92/31/EEC and 93/68/EEC.

CE Casio Electronics Co., Ltd.

NOTES

The SY-20 model B is tuned for American standard NTSC (M/M) system which is adopted in the following countries.

American Samoa, Antigua and Barbuda, Bahamas, Barbados, Belize, Bermuda, Bolivia, Cambodia, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Micronesia, Myanmar, Netherlands Antilles, Nicaragua, Panama, Peru, Philippines, Puerto Rico, Saint Christopher & Nevis, Saint Lucia, South Korea, Surinam, Taiwan, Trinidad and Tobago, U.S.A., Venezuela

NOTA

Cuando las condiciones de recepción son malas, es posible que el indicador no se detenga en ningún canal; ello significa que el sintonizador automático no puede sintonizar ningún canal porque las señales son muy débiles. En este caso, utilice una antena externa disponible comercialmente (sólo el modelo B) o ubique su televisor en otro sitio, donde logre una mejor recepción.

Lugares donde la recepción de TV no es buena

- Lejos de las emisoras de TV, entre estructuras de hierro o cerca de montañas.
- Sótanos, túneles y edificios con estructuras de hierro.
- Cerca de cables de alta tensión, carteles de neón o emisoras de radio cuyas frecuencias interfieran.
- Cerca de ferrocarriles, autopistas o aeropuertos.
- Dentro de trenes o automóviles.

Luz de fondo

En temperaturas bajas, llevará cierto tiempo hasta que el material fosforescente se ilumine, en algunos casos, la imagen toma un tono rojizo. Ello no significa que se haya averiado la unidad; la imagen se normalizará después de unos momentos.

FUENTES DE ALIMENTACION OPCIONALES

CA de la línea – Vea la Figura 1 en la Guía General en la parte superior de esta página.
El uso del adaptador opcional (AD-K64/AD-K65) permite alimentar la unidad con CA de la línea.

Batería de automóvil (CC 12V) – Vea la Figura 2 en la Guía General en la parte superior de esta página.
El uso del adaptador para automóvil opcional (CA-K65) permite alimentar la unidad por medio de una batería de automóvil, a través del receptáculo para el encendedor de cigarrillos. ***Nunca mire la televisión mientras conduce un vehículo.***

PRECAUCIONES

- Nunca intente conectar el adaptador en receptáculos para encendedores de vehículos con una alimentación de 24V de CC (camiones y autobuses en algunos casos).
- La alimentación por medio de las pilas se interrumpe automáticamente cuando se conecta un adaptador a la toma DC IN 6V.
- El adaptador podrá calentarse cuando se lo usa por un período prolongado de tiempo. Ello es normal y no significa que se haya averiado.
- Asegúrese siempre de usar el adaptador de CA AD-K64/AD-K65 (

- In trains or cars.

Backlight

In low temperatures, it will take some time for the fluorescent material to illuminate, or the light will take on a reddish tinge. This does not indicate malfunction of the backlight. Normal operation will resume after a short while.

OPTIONAL POWER SOURCES

AC household current – See Fig. 1 in General Guide at the top of this page.
The optional AC adaptor (AD-K64/AD-K65) allows the TV to be powered by standard household current.

Car battery (DC12V) – See Fig. 2 in General Guide at the top of this page.
The optional car adaptor (CA-K65) allows the TV to be powered by a car battery through the vehicle's cigarette lighter. ***You should never, however, attempt to watch television while operating a motor vehicle.***

PRECAUTIONS

- Never connect the car adaptor to cigarette lighters for such vehicles as trucks or busses that use 24V DC electrical power.
- When an adaptor is plugged into the DC IN 6V jack, the battery power source is automatically switched OFF.
- Adaptors may become warm to the touch after extended periods of use. This is normal and is no cause for alarm.
- Always be sure to use the AD-K64/AD-K65 AC adaptor (option) or CA-K65 car adaptor (option) only. Using any other AC adaptor or car adaptor can cause damage to the TV not covered by the warranty.
- Be sure to switch power off before connecting or disconnecting the adaptor.
- If you do not plan to use the TV for a long time, be sure to disconnect the AC adaptor from the wall outlet or the car adaptor from the cigarette lighter. Failure to do so may result in damage to the TV or it can run down your car's battery.

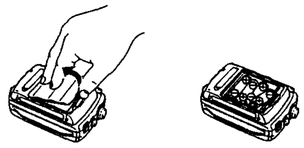
EXTERNAL ANTENNAS

Outdoor antenna (model B only) – See Fig. 3 in General Guide at the top of this page.
If you are located in a remote area, among ferro-concrete structures or in a mountainous region, reception can be adversely affected. In this case, purchase an antenna adaptor with a 3.5ø mini plug connector and connect it to your outdoor antenna. Insert the plug of the adaptor into the EXT ANT jack of the TV.

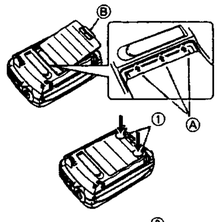
Car antenna (model B only) – See Fig. 4 in General Guide at the top of this page.
Reception may be unstable when the vehicle is in motion due to fluctuations in signal wave conditions. A commercially available car antenna with a 3.5ø mini plug connector can be used for better reception in motor vehicles. Consult the instruction manual for your antenna for details.

BATTERY INSTALLATION

1. Set the function selector to OFF.
2. Remove the battery compartment cover.
3. Load 4 batteries ensuring that the poles (⊕/⊖) are facing in the proper directions.

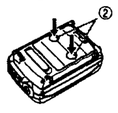


4. Insert the three battery compartment cover hooks Ⓐ into the holes along the edge the battery compartment opening.



5. Press with your thumbs at the two points marked by ① until Hook Ⓑ snaps into place.

6. Press with your thumbs at the two points marked ② to ensure that the cover is securely closed and sealed.



- Low battery power generates heat. Heat does not mean malfunction.
- Effective battery life may differ depending on brand.

VIDEO CONNECTIONS

The optional RF cord (model B only) or AUDIO/VIDEO cord lets you use the TV as a video cassette recorder monitor, etc. **See Fig. 5 and 6 in General Guide at the top of this page.**

PRECAUTIONS

- Be sure that the power of the TV and of the unit you are connecting it to is switched off.
- Use only hardware specifically recommended by CASIO when connecting to other equipment.

TROUBLESHOOTING

Check the following points before assuming malfunction of the TV.

Symptoms		Possible causes	What to do
Picture	Sound		
No picture	No sound	1. Dead batteries. 2. Polarity of batteries incorrect. 3. AC adaptor or car adaptor not properly connected. 4. Unauthorized power supply being used. 5. Connector plugged into Audio/Video jack.	1. Replace batteries. 2. Reinsert batteries making sure poles are properly aligned. 3. Correctly connect adaptor. 4. Use only specifically recommended power supplies. 5. Remove the plug while using the unit for TV reception.
No picture	Noise	1. Not properly tuned.	1. Adjust tuning.
Picture visible	No sound	1. Volume control dial turned too low. 2. Earphone inserted.	1. Turn up volume. 2. Disconnect earphone.
Picture all white	Sound heard	1. Brightness control not set correctly.	1. Adjust brightness control.
Picture not clear (picture moves up or down, disappears periodically, becomes fuzzy or blurred, is doubled, etc.)	Sound heard	1. Rod antenna folded. 2. Not properly tuned. 3. Battery power low. 4. Interference from automobiles, electric appliances, etc. 5. Reception bad due to weak signals, buildings, mountains, etc.	1. Extend rod antenna. Adjust angle and direction for best reception. 2. Adjust tuning. 3. Replace batteries. 4. • Move further away from appliance causing interference. • Change antenna position. 5. In locations with poor reception, it may not be possible to get a clear picture or any picture at all.
Vertical stripes on screen	Sound heard	1. Weak signal or interference.	1. • Extend rod antenna and set to proper angle. • Move to an area that allows better reception.
Picture dark or blurred	Sound heard	1. Brightness control needs adjusting. 2. Battery power low.	1. Adjust brightness. 2. Replace batteries.
Color light, not present	Sound heard	1. Rod antenna not extended.	1. Extend rod antenna and set to proper angle.

- If speaker output is very low or complete inaudible, it could mean there is water inside the speaker. If this happens, turn the speaker towards the ground so the water comes out.

SPECIFICATIONS

Type:	LCD Color Television
Reception Frequencies:	UHF: UHF band CH 14 – CH 69 (model B) CH 21 – CH 69 (model P CCIR) CH 21 – CH 68 (model P UK IR) VHF: VHF band CH 2 – CH 13 (model B) CH 2 – CH 12 (model P CCIR) CH A – CH J (model P IR) Though all of the above channels are not indicated on the channel display, they can all be received by the TV.
Display Element:	High resolution color liquid crystal display (Super Twisted Nematic Type)
Drive System:	Passive matrix system
Screen Size:	2.3 inches
Backlight:	High luminance fluorescent material
Antenna:	Rod antenna (VHF, UHF)
Speaker:	12/16ø inches (28 mm) × 1

phines, Puerto Rico, Saint Christopher & Nevis, Saint Lucia, South Korea, Surinam, Taiwan, Trinidad and Tobago, U.S.A., Venezuela

The SY-20 model P is tuned for CCIR, ITALY, UK and IR standard PAL (B/G,B/H,I/I) system which is adopted in the following countries.

Afghanistan, (Albania), Algeria, (Angola), (Australia), Austria, Bahrain, Bangladesh, Belgium, Brunei, Cameroon, Cyprus, Denmark, Ethiopia, Finland, Germany, Ghana, Gibraltar, Greenland, Hong Kong, Iceland, India, (Indonesia), Ireland, Israel, Italy, Jordan, Kenya, Kuwait, Luxembourg, Malaysia, Maldives, Malta, Monaco, Mozambique, Nepal, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Papua New Guinea, Portugal, Qatar, (San Marino), Seychelles, Sierra Leone, Singapore, (South Africa), Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Tanzania, Thailand, Turkey, Uganda, U.K., United Arab Emirates, Yemen, Zambia, Zimbabwe

* Countries in ( ) may have reception restrictions.

Model P is not provided with external antenna jack. RF cord, antenna adaptor, and car antenna are not available.

SPLASH-RESISTANT PRECAUTIONS

This TV is splash resistant under normal everyday use and can be used in areas subject to small amounts of rain, snow, and water. Note the following important precautions concerning the splash resistance of this TV.

- Never immerse the TV in water.
- Never pour water onto the TV.
- If water is poured onto the TV or if the TV becomes very wet, immediately wipe it off with a dry cloth.
- In areas subject to moisture, check the connector cover and make sure it is securely closed.
- Before opening or closing the battery compartment cover, move to an area that is not exposed to water or other moisture, wipe off any moisture near the battery compartment, and make sure your hands are dry as well.
- Should any water ever get into the battery compartment, immediately remove all of the batteries and wipe the inside of the battery compartment with a dry cloth.
- Always double-check to make sure the battery compartment cover and connector cover are installed correctly.
- Connector cover and battery compartment rubber gaskets play important roles in maintaining splash resistance. Treat these gaskets carefully so they do not become damaged.
- Even very fine foreign matter (such as hair, or dust) between a rubber gasket and the surface it contacts can result in moisture getting inside the TV. Always make sure the rubber gasket and the surface it contacts are clean before closing either cover.

Note that malfunction or damage to the TV due to water entering because of an open connector cover or battery compartment cover is not covered under the warranty.

Español

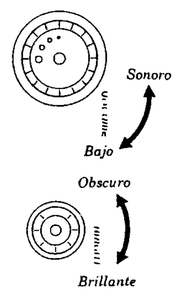
Muchas gracias por la compra de un televisor color con pantalla de cristal líquido (CL) de CASIO. Para disfrutar todas las características de esta unidad, sírvase leer este manual cuidadosamente y seguir sus instrucciones al pie de la letra.

PRECAUCIONES

- **Este televisor es resistente a las salpicaduras.**
- Energice el televisor con pilas solamente cuando lo utilice en un baño, cerca de una ducha, o cualquier otra área en donde pueda ser expuesto a la salpicadura de agua. El uso del adaptador de CA o adaptador de CA bajo estas condiciones crea el riesgo de descargas eléctricas.
- No intente sus propios mantenimientos y reparaciones.
- Evite el polvo.
- No use diluyentes o agentes químicos para limpiarlo.
- Use sólo los adaptadores y fuentes de alimentación especificados. Nunca utilice adaptadores distintos que los adaptadores originales CASIO. Adaptadores diferentes pueden ocasionar serios daños.
- Evite temperaturas extremas y la incidencia directa de los rayos del sol.
- Apague la unidad y desenchufe el adaptador cuando no la use.
- Evite todo tipo de golpes y caídas.
- Asegúrese de quitar las pilas siempre que no vaya a usar su televisor por un período de tiempo prolongado. Si se dejan pilas agotadas, las mismas podrán sulfatarse y dañar los componentes de la unidad.

FUNCIONAMIENTO

1. Extienda la antena telescópica.
2. Utilice el selector de función para seleccionar ya sea VHF o UHF.
3. Presione cualquier tecla de sintonización, y el indicador de sintonización se moverá al siguiente canal que puede recibirse. Repita esta operación hasta sintonizar el canal deseado.
4. Ajuste el nivel del sonido mediante el control de volumen.
5. Ajuste el brillo de las imágenes en la pantalla mediante el control de brillo.
   El brillo de la pantalla cambia según el ángulo de visión.

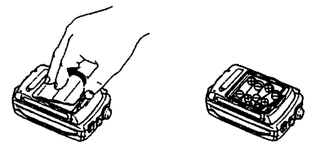


Antenas exteriores (sólo el modelo B) – Vea la Figura 3 en la Guía General en la parte superior de esta página.
La recepción no será muy buena en sitios alejados de las emisoras, entre estructuras de ferrocemento o en regiones montañosas. En dicho caso, compre un adaptador para antena con un miniconector de 3,5 de diámetro y conéctelo a su antena exterior. Conecte el enchufe del adaptador en la toma EXT ANT del televisor.

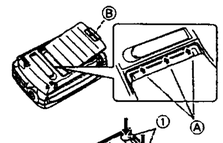
Antenas para automóviles (sólo el modelo B) – Vea la Figura 4 en la Guía General en la parte superior de esta página.
La recepción podrá ser inestable cuando el vehículo está en movimiento, debido a las fluctuaciones en la intensidad de las señales.
La recepción en vehículos motorizados será mucho mejor si se utiliza una antena de automóvil con un miniconector de 3,5 de diámetro.
Para mayores detalles, consulte el manual de instrucciones de su antena.

COLOCACION DE LAS PILAS

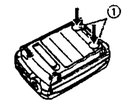
1. Fije el selector de función en OFF (desactivado).
2. Retire la cubierta del compartimiento de pilas.
3. Coloque 4 pilas asegurando que sus polos (⊕/⊖) se dirijan en las direcciones adecuadas.



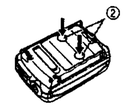
4. Inserte los tres ganchos Ⓐ de la cubierta del compartimiento de pilas en los orificios junto al borde de la apertura del compartimiento de pilas.



5. Presione con sus pulgares en los dos puntos marcados por ① hasta que el gancho Ⓑ se fije en posición.



6. Presione con sus pulgares en los dos puntos marcados ② para asegurar que la cubierta se encuentre seguramente cerrada y sellada.



PRECAUCIONES

El uso incorrecto de las pilas puede ocasionar que las mismas se sulfaten o exploten, y pueden ocasionar daños a la unidad. Tenga en cuenta las siguientes precauciones:

- Cerciórese que la polaridad (+/–) sea la correcta.
- No mezcle diferentes tipos de pilas.
- No mezcle las pilas nuevas con las pilas usadas.
- Nunca deje pilas agotadas en el compartimiento de pilas ya que pueden ocasionar fallas en el funcionamiento.
- Cuando no utilice el producto por un período prolongado retire las pilas.
- Se recomienda que las pilas se reemplacen una vez cada 2 años para prevenir de fallas en el funcionamiento.
- Nunca intente recargar las pilas.
- No exponga la pila al calor directo, no permita que se ponga en cortocircuito ni trate de desarmarla.
- Si una pila se sulfata, limpie el compartimiento de pilas de la unidad, teniendo cuidado de evitar que el fluido de la pila se ponga en contacto directo con su piel.
- Este televisor no es resistente a las salpicaduras mientras la cubierta del compartimiento de pilas está retirada.
- Este televisor no es resistente a las salpicaduras mientras la cubierta de su conector se encuentra retirada, o mientras el televisor se encuentra conectado a cualquier equipo o dispositivo externo.
- Antes de abrir o cerrar la cubierta del compartimiento de pilas, vaya a un área que no se encuentre expuesta al agua o humedad, limpie toda humedad cerca del compartimiento de pilas, y asegúrese también que sus manos estén bien secas.
- En caso de que ingrese agua en el compartimiento de pilas, retire de inmediato todas las pilas y limpie el interior del compartimiento de pilas con un paño seco.
- Verifique siempre doblemente para asegurarse que la cubierta del compartimiento de pilas y cubierta del conector se encuentran instalados correctamente.